



## DO SPECIALIZED PHYSICAL EDUCATION TEACHERS PARTICIPATE BETTER IN PHYSICAL EDUCATION CLASS?

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### **Abstract:**

Quality of teachers is the most important factor among all the factors that influence how children learn and grow in school. Teachers must have sufficient knowledge in the subject matter he/she teaches. It is a well accepted fact that teachers who do not qualify in physical education taught physical education in most of the primary and secondary schools. The qualification of the teacher matters for his/her participation in class. To study generalist, specialist and non-specialist teachers' participation in physical education class is the main purpose of the study. 53 Physical education classes of 17 primary and secondary physical education teachers were recorded and assessed by using a researcher-made Observation Tool for Teachers Participation (OTTP). The difference between required activities (R) and activities actually done (D) is calculated (referred as R-D) and analyzed. It is found that the mean value of difference between required activities and activities actually done (R-D) by specialized PE teacher (M=16.69) is comparatively less than generalized PE teacher (M=18) and non-specialized PE teacher (M= 37.33). Significant differences were found between mean scores of overall participation of generalist and non-specialist PE teachers ( $p=0.003$ ) as well as specialist and non-specialist teachers ( $p=0.004$ ). However, there is no significant difference found between overall participation of generalist and specialist PE teachers ( $p=0.946$ ). It is concluded that participation of specialist PE teachers in overall activities, instructional activities and organizing and managing activities is similar to generalists and superior over non-specialists.

**Keywords:** Physical Education, Specialist, Teacher, Participation in Class.

### **Introduction:**

School based physical education (PE) has been an important contributor to daily physical activity (PA) (Lorenz, 2014). According to Kohl et al., (2013) physical education can contribute at least half i.e. 30 min. of daily requirement of vigorous to moderate intensity physical activity of youth. Morgan, Beigle and Pangrazi (2007) have observed that students are more physically active on the day when they participate in physical education classes.

It is not feasible for schools to offer the 60 minutes every day to every child to meet their recommended PA levels so, PE teachers should try to provide as much PE time as possible when the students are in PE class. The students need to be active for over half of the time in class and learning should occur while the students are being active (Rink et. al., 2010). It is suggested that the children should spend 20-30 minutes daily on Moderate to Vigorous Physical Activity (MVPA) during school days and it has been proposed that 50 % of PE time should be spent in MVPA (Rush et al., 2012). Considering these facts and observations it is the skill of PE teachers to plan PE class/ lesson properly in such a way that students will learn physical activity, skills of various games, practice the skills and achieve as much as PE level of daily requirement. For students to participate actively in physical education class and achieve at least half of their daily PA requirement, physical education class needs to structurally plan and execute accordingly by PE teacher. In this regard, the role of a physical education teacher is very crucial. According to Sidetop and Tannehill (2000) quality of teachers is



the most important factor among all the factors that influence how children learn and grow in school. According to NASPE (2011), PE teachers should provide a safe environment at all times, differentiate lessons based on ability levels of students and use research based strategies. For this a physical education teacher must have subject knowledge and several teaching, managerial and interaction skills. Effective participation of teachers in PE class can achieve the learning outcomes of the students, enhance the participation of students in class and make them enjoy the physical activity.

Siedentop and Tannehill (2000) stated that active teachers consistently engage their students in PA and help them to become better learners. According to characteristics of active and effective PE teachers stated by Siedentop and Tannehill (2000), active teachers should possess good content and should have the ability to impart content knowledge to a wide range of learners. Rink (1993), Siedentop and Tannehill (2000) have broadly said three distinct categories that a teacher does in a PE lesson broadly. They are- instructional activities which are related to imparting subject content to students; organizing and managing activities dealing with organizing the learning environment and managing the lesson to maintain appropriate behavior; and other activities for developing and maintaining an effective learning environment. Teachers should convey the right amount of information effectively and efficiently and get students quickly into practice (Siedentop and Tannehill, 2000). A good teacher needs to have good managerial skills. A well-established managerial system not only reduces the opportunities for disruptive behavior and also quickens the pace of a lesson and maintains the momentum of that pace throughout the lesson. Effectively implementing managerial tasks not only reduces managerial time but increases chances of instructions and practice (Siedentop and Tannehill, 2000, p. 69). If the managerial tasks like using transition time, managing equipment, effective class formation, grouping time, are more effective, there are chances for children to become active or to engage. Besides being effective in instructional and managerial tasks, a good and effective teacher must possess effective interaction skills for developing sustainable discipline as well as for motivating and encouraging students for being physically active.

In India, lack of specialized physical education is one of the important issues to implement quality physical education programs or it can be said that teachers who do not qualify in physical education taught physical education in most of the primary and secondary schools. The qualification of the teacher matters for his/her participation in class. In primary and secondary schools there is an inadequacy of specialized PE teachers. Other subject teachers and general teachers (having qualified D.Ed./ D.T. Ed.) have to conduct PE class. To study how teachers, whether he/she is specialized in PE, general teacher or non-specialized teachers participate in the class, present study was undertaken.

### **Objectives:**

- To study participation of PE teachers in instructional, organizing, managing and other activities during physical education class.
- To study participation of generalist, specialist and non-specialist teachers in physical education class.

### **Hypotheses of the Study:**

**H<sub>1.1</sub>:** Participation of teachers specialized in physical education are significantly different than generalist.

**H<sub>1.2</sub>:** Participation of teachers specialized in physical education are significantly different than non-specialist teachers.

### **Methodology**

**Method:** The study is done by descriptive method. The observation tool is used to study the participation of teachers in physical education class.



**Sample:** To achieve the predetermined set of objectives 10 primary and 8 secondary Marathi medium schools from Satara City were selected randomly. From these selected schools 3 physical education classes of each teacher who taught physical education to 5<sup>th</sup> class (in case of primary school) and 8<sup>th</sup> class (in case of secondary school) were recorded with the help of SONY digital camera. Physical education classes of 18 teachers were recorded /observed. Teachers of 17 classes were recorded /observed thrice at three different lessons while one teacher was observed twice. Total 53 recorded lessons/classes of physical education were observed (n = 53).

### **Tools of the Study**

Teacher's participation in physical education class was assessed by observing video recording of class with the help of researcher-made Observation tool for assessing teacher's participation (OTTP) in PE class. The tool comprises 20 items which are the activities of teachers usually done during PE class and which have an impact on participation of student's PA and level of PA of students. Total score of all the items were summated for measuring the teacher's participation in class.

**Validity:** The content validity of the tool was established by experts in the field of teacher's training and research.

**Reliability:** The coefficient of correlation of the OTTP was found 0.61.

The tool was based on following major factors;

- **Instructional activities:** Activities associated with imparting subject content to students, evaluation.
- **Organizing and managing activities:** Activities associated with organizing the learning environment and managing the lesson to maintain appropriate behavior in order for learning to occur.
- **Other activities:** It includes activities to develop and maintain an effective learning environment such as; use of praise, motivating children to participate in various activities, giving activities accordingly.

### **Procedure of Data collection:**

Researchers took permission for recording the physical education classes from school authority before starting data collection procedure. As per schedule provided by school, researchers set the position of two SONY digital video cameras in two different positions prior to the class so that the entire class got recorded. Both the cameras were started when the teacher started the lesson, and at the time when teacher ended the lesson, cameras were stopped. Thus three physical education classes of each teacher were recorded. The name, gender, educational qualification and years of experience of the teacher were recorded. All the recorded physical education lessons were analyzed and the scores were recorded in the observation score sheet.

**Procedure of observation:** The teacher's participation observation tool has 20 activities generally done by the teacher in class and has a direct impact on physical activity of students. Each lesson/class was observed by using Event Recording Observation technique. The activities occurring in intervals of three minutes were observed and frequency of activity required (referred as R), frequency of activity actually done by the teacher (referred as D) was recorded in the respective columns in each interval. Frequency of required activities, frequency of activities done, was summed up. Since, PE classes included mass activities, drills, games, skill teaching, Yoga, ground marking, and assessment; we subtracted the number of required activities and number of activities actually done by the teacher and referred to it as R-D.

### **Results:**

The data obtained through assessing each PE class is filled up in an Excel data sheet and analyzed by using SPSS version 17.0 software. All the extreme scores (outliers) were excluded before analyzing the data.



Table 1 Descriptive statistics of difference between overall activities required to do and activities actually done by teachers (R-D) in PE class

Activities	Specialist			Generalist			Non-specialist		
	N	M	SD	N	M	SD	N	M	SD
Overall activities	13	16.69	13.60	32	18.00	11.85	6	37.33	6.59
Instructional activities	12	2.83	2.443	30	2.86	3.037	6	12.50	3.83
Organizing & Managing activities	14	4.78	5.925	31	4.58	4.388	6	11.34	1.63
Other activities	14	8.46	8.282	33	10.06	6.960	6	14.00	2.09

Note: N= no. of teachers; M = mean ; SD= standard deviation

It is seen from above table no. 1 that, the mean value of difference between required overall activities and overall activities actually done (R-D) done by specialized physical education teachers is 16.69 which is lesser than the mean values of generalist teachers and non-specialist teachers. In case of instructional activities, organizing-managing activities and other activities the same trend is observed. It is observed that non-specialist PE teachers show greater difference in activities required to do and activities actually done.

Table 2 ANOVA test for difference between overall activities required to do and activities actually done by teachers (R-D) in PE Class

	Groups	Sum of Squares	df	Mean Square	F	Sig.
Overall activities	Between	2072.721	2	1036.360	7.318	0.002*
	Within	6798.103	48	141.627		
	Total	22246.052	51			
Instructional activities	Between	488.179	2	244.090	27.012	0.001*
	Within	406.633	45	9.036		
	Total	894.813	47			
Organizing & Managing activities	Between	237.271	2	118.635	5.438	0.007*
	Within	1047.239	48	21.817		
	Total	1284.510	50			
Other Activities	Between	126.198	2	63.099	1.291	0.284
	Within	2395.110	49	48.880		
	Total	2521.308	51			

Note: ‘\*’ – significant at 0.05 level

Table no. 2 represents that, in case of overall activities, instructional activities, organizing-managing activities F values of difference between required activities and activities actually done (R-D) done by specialist, generalist and non-specialist are statistically significant at 0.05 level of significance (p<0.05). While, F values of difference between required other activities and other activities actually done (R-D) done by teachers of three different categories are not statistically not significant at 0.05 level.

Table No. 3 Scheffe’s Post-hoc test for difference between overall activities required to do and activities actually done by teachers (R-D) in PE Class

	Specialty (I)	Specialty (J)	Mean Difference (I-J)	Std. Error	Sig.
Overall activities	Generalist	Specialist	1.31	3.914	0.946
	Generalist	Non-specialist	-19.33	5.294	0.003*



	<b>Specialist</b>	<b>Non-specialist</b>	-20.64	5.874	0.004*
<b>Instructional activities</b>	<b>Generalist</b>	<b>Specialist</b>	0.033	1.027	0.999
	<b>Generalist</b>	<b>Non-specialist</b>	-9.633	1.344	0.001*
	<b>Specialist</b>	<b>Non-specialist</b>	-9.667	1.503	0.001*
<b>Organizing &amp; Managing activities</b>	<b>Generalist</b>	<b>Specialist</b>	-0.205	1.504	0.991
	<b>Generalist</b>	<b>Non-specialist</b>	-6.752	2.083	0.009*
	<b>Specialist</b>	<b>Non-specialist</b>	-6.547	2.279	0.022*

Note: ‘\*’ – significant at 0.05 level

It can be seen from table no. 3, difference between required activities and activities actually done (R-D) by generalist and non-specialist is significantly different in overall activities, instructional activities, organizing and managing activities (respective p value is 0.003, 0.001, 0.009). While significant differences are also found between R-D values of overall activities, instructional activities, organizing and managing activities of specialist and non-specialist teachers at 0.05 level of significance (respective p value is 0.004, 0.001, 0.022).

### Discussion

The results of the study clearly indicate that specialized and generalized teachers have not significantly different participation in overall activities, instructional activities and organizing-managing activities rejecting research hypothesis H<sub>1.1</sub>. Generalized teachers participated in the present study, have taken a diploma in education, physical education is one of the subjects they have studied. In the training period they have been taught to plan and conduct PE lessons. Due to this reason, they may not show a difference in participation in PE class as compared to specialized PE teachers. However, participation of non-specialized PE teachers in other activities during PE class is similar to specialized and generalized teachers. It may be because being a teacher, every teacher makes use of praise and motivation, to motivate and praise students does not require PE specific knowledge. Praising and motivating students is independent of subject knowledge or specialization. Results also show that non-specialized PE teachers show comparatively greater difference between activities required to do while conducting lesson/class and the activities they actually do than the generalized and specialized teacher. Hence researchers accept research hypothesis H<sub>1.2</sub>. It shows non-specialized teachers’ participation in the PE class is low. The difference in participation of teachers in instructional activities is seen due to lack of content knowledge about PE in generalized and non-specialized teachers. Research (Mckenzie et al., 2001) has made clear that certified physical education specialists can provide more and longer opportunities for students to meet physical activity guidelines compared with classroom teachers trained to teach physical education. According to Cothran and Kullina (2008), a teacher's knowledge is a major factor in effective teaching. In fact, qualified and certified physical education staff in schools is inadequate. In primary schools D.Ed./ D. T. Ed. teachers conduct the PE class. In elementary school, responsibility for physical education is often shared between a PE specialist and the classroom teacher. Ignoring the importance of Physical education in developing students, most of the secondary schools have allotted PE classes to non-physical education teachers to teach physical education. As a result, it becomes difficult to implement a quality PE program.





## Conclusions

The present study concluded that, in small cities like Satara, the number of physical education teachers in secondary schools who are specialized in physical education is very less. Participation of specialist PE teachers in overall activities, instructional activities and organizing and managing activities is similar to generalists and superior over non-specialists.

## Recommendations

It is recommended that appointment of certified PE teachers in adequate numbers is the need of hours. It is also suggested that teachers who taught PE in primary and secondary schools should provide special training and should impart content knowledge of Physical education in order to achieve learning outcomes of students.

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